during virologic failure. Genotypic assays are generally preferred because of cost and rapidity, except in situations where multiple ART regimens have been used, when phenotypic assays may be of value.

When abacavir is being considered as part of an ART regimen, genetic screening for HLAB* 5701 is helpful to reduce the risk of severe abacavir hypersensitivity reactions. These reactions, reported in 5-8% of white and 2-3% of black patients occur primarily in individuals with the MHC class I allele HLA-B*5701. Individuals who screen positive for HLA-B*5701 should not receive abacavir.

When a CCR5 antagonist (e.g., maraviroc) is being considered as part of an ART regimen, a coreceptor tropism assay is useful, since an agent of this class will only suppress viruses that utilize this receptor (R5 viruses). CCR5 antagonists should not be used in individuals who carry primarily X4 or dual/mixed tropic viruses. Currently, the principal assay available to measure HIV-1 tropism is phenotypic, though genotypic tests are under study.

Although therapeutic drug monitoring is recommended by some, its use remains controversial, and no clear-cut recommendations can be made regarding its utility.

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62.003

Opportunistic Infections and IRIS in the Era of HAART

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Despite the important advance that cART represents for the prognosis of the HIV-1 infection, OIs continue to be an important cause of morbidity and mortality in developed countries. This is due to late presentation (up to one-third of new HIV-1 infections), lack of adherence to cART and prophylaxis or virological failure of cART. In addition, OIs are very common in developing countries, being tuberculosis (TB) the most common one. The ACTG A5164 results recommended to start cART during the first 2 weeks after starting antimicrobial treatment for the OI (patients with TB were not included in this RCT). Some of these patients, despite having an excellent viral and immune response to cART, will present a paradoxical worsening of the OI known as the immune reconstitution inflammatory syndrome (IRIS). The microorganisms most commonly associated with IRIS are mycobacteria, fungi, and herpes group viruses. The IRIS has also been reported in tumors, such as Kaposi sarcoma, and causes autoimmune diseases. The percentage of patients who develop IRIS is variable. In cohort studies of patients starting cART, IRIS affects between 15% and 25%. In OIs series like TB the frequency is higher, and can reach 50%. Clinical effects of IRIS range from a mild, self-limiting illness to severe morbidity and mortality. The lack of evidence-based treatment guidelines poses challenges in the management of these patients. Patients are generally recommended to continue with cART and specific treatment against OIs. Adjuvant nonsteroid anti-inflammatory drugs (NSAIDs) and corticosteroids are commonly used. Corticosteroids have demonstrated their usefulness in a recent clinical trial in TB patients. Surgery is necessary to debride abscesses. In life-threatening cases, the possibility of interrupting cART should be considered until the patient's situation has improved. Clinical experience with immunosuppressors or TNF-alpha inhibitors is very limited.

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Why are patients dying in the HAART Era?

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Biomarkers in infectious diseases (Invited Presentation)

63.001

Clinical Use of Biomarkers in the Diagnosis and Management of CAP

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Community-acquired pneumonia (CAP) is a serious health problem worldwide with an annual incidence of 0.3-0.5% in the adult population. Besides, CAP remains the leading cause of death from infectious diseases. This justifies the interest in studying all clinical aspects affecting CAP. A new approach is to evaluate biological markers of infection and inflammation, as an expression of the hostĭs inflammatory response against the microorganism, in order to achieve diagnosis, aetiology, progonosis and treatment information. The most widely studied biomarkers have been C reactive protein (CRP), procalcitonin (PCT) and cytokines. Other biomarkers are now obtaining promising results. Most authors conclude that biomarkers can help in the diagnosis of CAP. Fewer data analyse the capacity of biomarkers in identifiying the potential causative agent and the best results have been settled down in children. Linked with the above mentioned, biomarkers, mainly PCT, have been used succesfully guiding antibiotic prescription in patients with suspected CAP. Treatment guided by serum PCT was a safe way to avoid antibiotics, although economic savings were overshadowed by PCT analysis costs. Approximately 10-15% of patients hospitalised for CAP develop treatment failure and almost 6% may manifest rapidly progressive pneumonia, it has been demonstrated that serum levels of biomarkers can identify patients at risk of treatment failure and therefore could guide treatment handling. Clinical data scoring systems have been recognized as a useful tool to assess stability and prognosis of patients with CAP. Analysis of systemic biomarkers in adition to clinical scores has shown to improve either the prediction of absence of severe complications and the 30-day mortality prediction by PSI or CURB65/CRB65 scales. Current data from literature seem to support the use of biomarkers in the daily medical practice concerning CAP.

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